

# PATENT ABSTRACTS OF JAPAN

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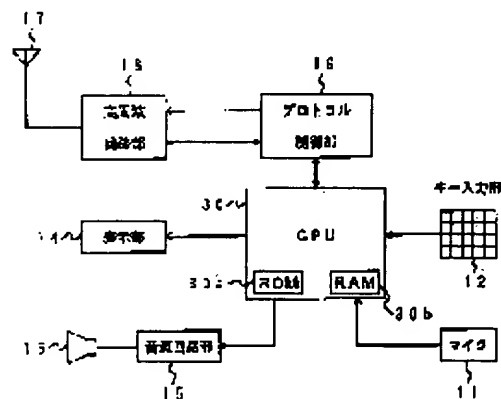
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## (54) TELEPHONE SET

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To execute control by means of character transmission even in a terminal in a system with a different character transmission communication system by utilizing character information in additional information, transmitting character information from a caller side terminal to a callee side terminal and also controlling the callee side terminal by means of character transmission.

**SOLUTION:** In RAM 30b, CPU 30 stores character data from reception data of a protocol control part 19 in accordance with the program of ROM 30a, and checks whether or not a voice signal reception control code is included in the character data. When the control code exists, CPU 30 executes a response operation and stores the voice signal in RAM 30b. Then, CPU 30 executes display in a display part 14 in accordance with the input instruction of a user and reproduces and outputs corresponding voice message from a speaker 16 through a sound source circuit part 15. Thus, the callee side terminal is controlled from the caller side terminal as necessary.



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**CLAIMS**


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**[Claim(s)]**

[Claim 1] A telephone set characterized by having a detection means to detect whether a control code which controls the telephone set concerned to said received additional information is contained in a telephone set which can receive additional information, and a control means which performs control applicable to this control code when said control code is contained by said detection means.

[Claim 2] It is the telephone set which this telephone set performs alphabetic transmit in a telephone set according to claim 1 at the time of a call setup by the side of a network with an ISDN network, and is characterized by using an alphabetic transmit function to wear said additional information and to set a character string as sub-address information or a packet information element.

[Claim 3] It is the telephone set which sets to a telephone set according to claim 1, and is characterized by this telephone set using an alphabetic transmit function to perform alphabetic transmit by DTMF signal at the time of a communication link, and to set a character string as said additional information.

[Claim 4] It is the telephone set characterized by recording a sound signal from the end of a calling party side edge when a control code of a purport to which this telephone set records to said received additional information in a telephone set according to claim 2 or 3 is contained.

[Claim 5] A telephone set characterized by regarding a predetermined alphabetic character contained in a character string of said additional information as a control code which controls the telephone set concerned when this code is in agreement with a code currently recorded on the telephone set concerned in a telephone set which can receive additional information including a code which specifies the end of a calling party side edge as said additional information.

[Claim 6] A code which specifies said end of a calling party side edge in a telephone set according to claim 5 is a telephone set characterized by being a maker or a model code.

[Claim 7] When a control code of a purport which is equipped with the following and records a sound signal from said end of a calling party side edge to said received additional information is contained After receiving alphabetic transmit from said end of a calling party side edge using said alphabetic transmit function and memorizing for said character string storage means, a message with this end of a calling party side edge is established. A telephone set according to claim 6 characterized by memorizing a sound signal received from this end of a calling party side edge for said sound signal storage means. This telephone set is a character string storage means to memorize a character string sent from the end of a calling party side edge. A sound signal storage means to memorize a sound signal sent from said end of a calling party side edge

[Claim 8] A character string memorized by said character string storage means in a telephone set according to claim 7 and a sound signal memorized by said phonetic memory means corresponding to this character string are a telephone set characterized by relating and memorizing and making refreshable a sound signal corresponding to the time of a display of said character string.

[Claim 9] A telephone set characterized by wearing said character string from an ISDN communication network at the time of a call setup, and receiving as sub-address information or packet information in a telephone set according to claim 5 to 8.

[Claim 10] A telephone set characterized by setting to a telephone set according to claim 5 to 8, and receiving said character string by the alphabetic transmit function using a DTMF signal at the time of a communication link.

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## DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] This invention uses a telephone set, sub-address information [ in / more specifically / an ISDN network ], and the additional information by the DTMF (Dual-Tone-Multi-Frequency) signal at the time of a message, and relates to the telephone set system which has an alphabetic transmit function and a sound recording function. In addition, the term "a telephone set" used on these specifications is used in semantics also including the information terminal equipped with the telephone set function with these specifications.

[0002]

[Description of the Prior Art] In an ISDN network, in case the call connection demand whose end of a calling party side edge sends out the selection signal which shows the telephone number in the end of a called party side edge to a switched network is performed, sub-address information can be transmitted after the telephone number in the end of a called party side edge the end of a calling party side edge. With the ISDN network, by transmitting such sub-address information, even when bus wiring connection of two or more telephone sets is made at the telephone number for example, in the end of a called party side edge, it makes it possible to call a specific telephone set.

[0003] The use use of such sub-address information does not call breadth and a specific telephone set, but research and development of the telephone set system equipped with the alphabetic transmit function to send alphabetic information etc. in the end of a called party side edge using sub-address information are done on the other hand in recent years. If the call-in information from ISDN is received, the sub-address information included in this call-in information is detected and analyzed, and, specifically, the conventional technology which displays the alphabetic character corresponding to this sub-address information on displays, such as LCD, is indicated by JP,6-334776,A or JP,3-38946,A.

[0004] Moreover, in the Personal Handyphone System (PHS is called henceforth) which used the ISDN network, for example, transmission and a display of alphabetic information are enabled by the alphabetic transmit function using such sub-address information, without the end of a called party side edge answering. It enables it to correspond to a user's various needs by corresponding also to such "non-voice communication link" service by enabling it to use a PHS telephone set as a pocket bell in which transmission of an alphabetic character message, management, and a display are possible, in addition transmitting the alphabetic character message using a DTMF signal.

[0005]

[Problem(s) to be Solved by the Invention] However, in such an alphabetic transmit function, it was what transmits, manages and displays only the message in an alphabetic character. For this reason, there was a problem that he had to telephone, again to tell the voice-told message relevant to transmission of an alphabetic character, for example. Moreover, when a called party was not able to answer according to a certain situation, the called party needed to set up the sound recording function (answering machine function) interlocked with automatic answering and it each time, and a calling party side was not able to control the end of a called party side edge to arbitration. Thus, although it was possible to have

performed an alphabetic character transport service with the conventional technology, it was not only able to remain in transmission of an alphabetic character, management, and a display, and service realized by controlling the end of a called party side edge was not able to be offered.

[0006] Moreover, the conventional technology of memorizing the message which would perform automatic incoming connection processing and will have been sent by the calling party if it judges whether it being the telephone number into which the telephone number in the end of a calling party side edge is registered and is registered when JP,6-14651,B has arrival of the mail, for example is indicated. However, with this conventional technology, the telephone number in the end of a calling party side edge must be registered into the telephone set of a destination side to the last, and a calling party side was not able to control the end of a called party side edge to arbitration like the conventional technology mentioned above. Moreover, a DTMF signal and the control signal in an ISDN network are incompatible, and control command differed by each method.

[0007] This invention solves the technical problem of such conventional technology, and the alphabetic transmit function by additional information other than the speech information using sub-address information, the packet information using an ISDN circuit, or a DTMF signal is developed further. While using the alphabetic information in additional information and sending alphabetic information to the end of a called party side edge from the end of a calling party side edge It aims at offering the high telephone set of functionality which enables control control by alphabetic transmit also in the terminal on the system by which the communication modes of alphabetic transmit differ by making it possible to control the end of a called party side edge by alphabetic transmit (communication link).

[0008]

[Means for Solving the Problem] This invention has a detection means to detect whether a control code which controls the telephone set concerned to additional information received in a telephone set which can receive additional information in order to solve an above-mentioned technical problem is contained, and a control means which performs control which corresponds when it is judged that a control code is contained by this detection means.

[0009] Moreover, when this code is in agreement with a code currently recorded on the telephone set concerned in a telephone set which can receive additional information including a code which specifies the end of a calling party side edge as additional information according to this invention, a predetermined alphabetic character contained in a character string of additional information is regarded as a control code which controls the telephone set concerned.

[0010]

[Embodiment of the Invention] Next, with reference to an accompanying drawing, the gestalt of operation of the telephone set by this invention is explained to details. Drawing 3 is the functional block diagram showing the gestalt of this operation in case [ at which it applied, for example to radiotelephones, such as PHS, ] the telephone set by this invention is connected to an ISDN network in between base stations. The microphone into which 11 inputs the message with the end of a called party side edge, and a voice-told message in this drawing, The key input section into which 12 inputs various kinds of data, such as the telephone number in the end of a called party side edge, and an alphabetic character or a control code, CPU (central processing unit) by which 30 controls this whole telephone set, the display as which 14 displays alphabetic information, such as an alphabetic character message and the telephone number, The sound source circuit section from which 15 changes a digitized voice signal into the sound signal of an analog, The loudspeaker from which 16 changes an analog sound signal into voice, the antenna with which 17 radiates or receives an electric wave, The RF circuit section which 18 makes generate the RF signal modulated by transmission data, or recovers transmission data from a RF signal, and 19 are protocol control sections which control a communicative procedure and a communicative data structure.

[0011] CPU30 operates according to the program written to ROM30a with the signal from the key input section 12 and the RF circuit section 18, and the protocol control section 19. Specifically, CPU30 confirms whether the control code of a purport which memorizes an alphabetic character message to RAM30b, and receives a sound signal in this alphabetic character message from the received data from

the protocol control section 19 is contained. When this control code is contained, CPU30 performs response actuation and manages it with the alphabetic character message which recorded the information which recorded and recorded the sound signal from a calling party to RAM30b. And when the user of the telephone set concerned operates the purport which displays an alphabetic character message on a display 14, CPU30 carries out the playback output of the corresponding voice-told message by the sound source circuit section 15 and the loudspeaker 16 while displaying an alphabetic character message on a display 14.

[0012] In addition, although drawing 3 has indicated ROM30a and RAM30b inside CPU30, there is no necessity of forming especially these in the interior of CPU30, and CPU can also use ROM and RAM which were prepared separately. Moreover, although a voice-told message is also memorized to RAM30b with an alphabetic character message here, a voice-told message may be memorized to storage, such as another Flash (flash plate) memory.

[0013] Thus, when it judges whether the control code of a purport which receives a sound signal is contained and this control code is contained in the alphabetic character message by the telephone set by the gestalt of this operation, while performing response actuation automatically and being able to record the voice-told message from a calling party, it is possible to reproduce the voice-told message recorded at the time of the display of an alphabetic character message.

[0014] The flow of operation by the side of a calling party (origination side) is shown for the flow of operation in case the telephone set by the gestalt of this operation shown in drawing 1 at drawing 3 is a called party side (destination side) in drawing 2 again, respectively. The actuation in the gestalt of this operation is explained using drawing 1 - drawing 3. First, in drawing 2, it wears by performing a call setup in the end of a calling party side edge [ being waiting (S201) ], transmitting procedure of an alphabetic character transfer message is performed using a sub-address, packet information, or a DTMF signal (S203), and call origination processing is performed.

[0015] When call origination processing from the end of a calling party side edge is performed, a call setup is \*\*\*\*\* (S103) by for example, the ISDN network (PHS network) or the exchange the end [ being waiting (S101) ] of a called party side edge the call connection demand was received as shown in drawing 1. And if it was transmitted, it wears from the end of a calling party side edge and sub-address information or a DTMF signal receives alphabetic information, it will wear and CPU30 (refer to drawing 3) in the end of a called party side edge will judge [ this ] whether the alphabetic character transfer message from a calling party is contained in sub-address information (S105).

[0016] And when it wears and the alphabetic character transfer data from a calling party is not contained in sub-address information, CPU30 controls the protocol control section 19, and performs the usual arrival-of-the-mail actuation (S107). On the other hand, when alphabetic character transfer data is contained, as for CPU30, this alphabetic data is memorized to RAM30b (S109). And it judges whether the control code (the code which shows sound recording time amount is sufficient) of a purport which attaches a voice-told message in this alphabetic character transfer data is contained (S111).

[0017] And when the control code of a purport which attaches a voice-told message is not contained, CPU30 performs the usual alphabetic transmit actuation, i.e., display processing of the alphabetic character message which received to the display 14. On the other hand, when the control code of a purport which attaches a voice-told message is contained, CPU30 controls the protocol control section 19, response actuation is performed (S115), and sound recording initiation is processed so that the message from a calling party can be memorized to RAM30b (S117).

[0018] On the other hand, if the response in the end of a called party side edge is detected (S205), transmission (playback) of a voice-told message will be started (S207) and transmission (playback) of a voice-told message will be completed the end of a calling party side edge (S209), transmission (playback) of a voice-told message will be suspended (S211), cutting actuation of a circuit will be performed (S213), and it will become waiting (S215).

[0019] On the other hand, after performing processing S117 of sound recording initiation, CPU30 supervises whether the disconnect request from the end of a calling party side edge has been recognized, or sound recording time amount passed (S119), when it corresponds to either among these, it performs a

sound recording halt (S121), it performs line disconnection actuation (S123), and becomes waiting the end of a called party side edge (S125).

[0020] In addition, control codes, such as a purport which attaches a voice-told message, need to be correctly recognized as a control code in the end of a called party side edge. For this reason, with the gestalt of this operation, the manufacturer code or model code beforehand defined by the telephone set manufacture maker is used so that it can recognize by the telephone set by making predetermined alphabetic data into a control code. That is, if the telephone set by the side of a calling party and a called party is the same manufacture maker, from the end of a calling party side edge, the message playback time amount (between sound recording templates) from a sound recording initiation data side and a calling party side can be transmitted, and sound recording preparation in the end of a called party side edge, initiation, termination, etc. can be controlled by making recognition possible by the called party side telephone set by making predetermined alphabetic data into a control code, after receiving this manufacturer code from the end of a calling party side edge to arbitration, for example.

[0021] Moreover, with the gestalt of the 1st operation, according to making it relate to sound-recording management data (shot ID - for the transmitted alphabetic character message data-voice-told message to be memorized where correspondence is able to be taken respectively) as shows the alphabetic character message of which RAM30b sound recording was done to drawing 4 (b), and making it memorize in memory, the voice recorded during alphabetic character message transmission can be made to be able to respond, and it can be heard.

[0022] By coincidence of a manufacturer code etc., specifically For example, when the alphabetic character message "E1", "3", and "0" is transmitted, the case where the semantics of this alphabetic information (1 E 30) is beforehand defined for the sound recording time amount by the side of a calling party as 30 seconds -- continuing -- "SU", "ZU", and "KI" -- if ... and alphabetic information are transmitted, the semantics as the whole will serve as sound recording time amount of a message, and a description (the calling party name etc. was included).

[0023] Moreover, by coincidence of a manufacturer code etc., when the alphabetic character message "E1" carries out beforehand various definitions, such as "30-second sound recording" or "time amount to the line connection by sound recording playback", from the beginning, grasp of the message sound recording time amount by the side of a calling party (recorded message playback time amount) etc. can recognize easily.

[0024] Since it turns out also by the calling party side that the call-in response was carried out after transmitting such a message, a calling party side sends out the recorded message of the voice prepared beforehand after a call-in response, and in a called party side, since the playback time amount of a recorded message is known beforehand, sound recording initiation or closing can be performed automatically. Here, although it is possible to turn off actuation of the sound recording section with a built-in main part of a telephone set after sound recording termination, and to turn off actuation of the sound recording section after OFF or playback termination, it is controllable at any cost by the definition of the control code mentioned above.

[0025] Drawing 4 (a) is explanatory drawing having shown the display in case there are an alphabetic character message and a voice-told message attached to this in the end of a called party side edge, and the example of actuation. If there is still a non-reproduced voice-told message as shown in drawing 4 (a), it will be displayed, for example on a display 14 as a "ONSEI message ant", "3 JINISHINJUKU", and "045\*\*\*++++." Defining the "ONSEI message ant" in this case as displaying these alphabetic characters, when alphabetic information E2 is received from a calling party side, "3 JINISHINJUKU" is the alphabetic character message which received from the calling party side, and "045\*\*\*++++" is the telephone number of a calling party terminal.

[0026] When the display of such a display 14 is seen and a called party does the depression of the playback key 12a in the key input section 12, as the display of the "ONSEI message ant" of a display 14 changes to "message SAISEICHUU" and it is shown in the sound recording management data shown in drawing 4 (b), it is "\*\*\* (calling party name). It is waiting at the Shinjuku station east gate outlet of No. 3 at 3:00 today! The voice-told message of "is reproduced.



[0027] Drawing 5 is the sequence diagram having shown the processing outline of the telephone set system in the gestalt of this operation. That is, the outline [ network / containing an ISDN network / the destination side which shows the origination side and the end of a called party side edge the end of a calling party side edge it was shown in drawing 1 and drawing 2 is shown, and / PHS ] of processing is shown in this. In drawing 5, by the origination side, as step S11 shows first, alphabetic transmit selection actuation is carried out, and it considers as an alphabetic character transmission mode. Next, an alphabetic character message is created by the key input section 12 shown in drawing 3 as step S12 shows. And as step S13 shows, the destination-side telephone number is inputted. Then, as step S14 shows, call origination actuation performs call origination processing.

[0028] If the base station located in the message area of the PHS network (a PHS network is called henceforth) containing an ISDN network detects this call origination processing, as step 15 shows between an origination side and a PHS network, "link channel establishment" control will be performed, and a circuit will be connected between an origination side and a PHS network. And after this "link channel establishment", an origination side is performed to the base station where CC call setup was connected, wears the alphabetic character message created at step S12, and transmits as a sub-address.

[0029] After CC call setup from an origination side is completed, from the base station located in the message area of the called party terminal of a destination side with which the origination side performed the call connection demand, a PHS network performs "link channel establishment" shown in step S16, and connects a circuit between a PHS network and a destination side. Thus, a circuit is connected between an origination side and a destination side. It is transmitted after this "link channel establishment" as data of an origination side with which it wears and a sub-address contains an alphabetic character message in CPU of a destination side.

[0030] An alphabetic character message is stored, and drawing 6 is worn, and shows an example of the data format of sub-address information. As shown in drawing 6, it wears, and one octet is 8 bits, 1 octet eye wears, a sub-address information-element identifier field and 2 octet eye wear, and, as for the sub-address, the contents length field of a sub-address and 3 octet eye serve as an escape, sub-address classification, E/O, and a reservation field.

[0031] With the gestalt of this operation, even six to 25 octet is used as alphabetic information or a control-code field, using 4 octet eye and 5 octet eye as a maker's original maker code or a model code. A maker code is shown by 2 bytes and a control code and an alphabetic character message are stored due to 1 octet = 1 character. Therefore, a control code and an alphabetic character message can be transmitted to 20 characters in total.

[0032] Thus, if the control code and alphabetic character message containing the maker code or model code which wore, and has been stored and transmitted to sub-address information are received by the destination side, the received alphabetic data will be memorized in memory, as step S20 shows. And as it analyzes, and there is a maker code and it is shown in step S20 whether the maker using the control code of a telephone set or the model code is contained in alphabetic character transfer data, data analysis of whether the control code is contained by six to 25 octet is performed at step S21, and if the control code is contained, according to the contents, actuation based on a control code as shown in step S22 will be performed before message actuation.

[0033] In addition, although the gestalt of operation mentioned above explained the case where the voice-told message relevant to an alphabetic character message was sent in the end of a called party side edge by controlling the end of a called party side edge from the end of a calling party side edge This invention is by including the code (alphabetic character) beforehand decided in the alphabetic character message using the alphabetic transmit function by the sub-address information in an ISDN network, packet information, or the DTMF signal at the time of a communication link to control the end of a called party side edge from the end of a calling party side edge. Therefore, without being limited to the gestalt of the above-mentioned operation for example, -- " -- the voice-told message recorded beforehand " about which it finds out -- " -- the alphabetic character message set up beforehand "The conditions (area of the connected base station etc.) of a telephone set are investigated", [ "to take out, "a dial being locked", "actuation of a telephone set being locked", "a melody being sounded", "it finding

out about timed recording", "absence setup / discharge being performed", "the contents of a functional setting of a telephone set being taken out" out ] It can use for various kinds of uses.

[0034] Drawing 7 and especially drawing 8 are the flow charts which showed the gestalt of other the operations of these in this invention in case the contents of the control code are not limited. In addition, drawing 7 and drawing 8 show 2 processings of 1 in all ream. In drawing 7, since steps S701-S713 turn into substantially steps S101-S113 shown in drawing 1 with the same processing, the explanation which overlaps here is omitted.

[0035] In step S711, when the maker who uses the control code of a telephone set into alphabetic character transfer data, or the model code is contained, it detects whether the control code which shows response actuation is in alphabetic character transfer data (S715). If response actuation is performed (S717) and there is actuation under message to a control code further when there is a control code which shows response actuation (S719), actuation based on this control code will be performed (S721).

[0036] If there are no message continuation directions after the case where it is judged that there is no actuation under message to a control code in step S719, and processing of step S721 finish (S723), line disconnection actuation will be performed (S729). Moreover, when there are message continuation directions shown in step S723, and when automatic-disconnect actuation is not required, (S725) and the usual message actuation are performed. On the other hand, when the automatic-disconnect actuation shown in step S725 is required, line disconnection actuation of step S729 is performed.

[0037] When response actuation is judged that it is required and that there is nothing at step S715 after performing cutting actuation of step S729 or, it judges whether a control code has the actuation when returning waiting (S731). When it is judged that there is actuation when returning waiting at step S731, actuation based on a control code also including dispatch actuation of alphabetic transmit actuation etc. is performed (S735). Moreover, it becomes waiting when it is judged that there is no actuation when returning waiting at step S731 (S733).

[0038] Thus, according to the gestalt of this operation, a manufacturer code is checked and it judges whether it is the alphabetic information from the telephone set of the maker who uses a telephone set control code, and if it is not the maker who uses it, it will be confirmed as usual alphabetic information whether a certain specific character code is contained. And if the specific character code is contained, that character code will be judged as a control code of a telephone set, and actuation shown in this control code is performed. Therefore, since the character code is treated as an alphabetic character when received by a different maker's telephone set, there is an advantage of not having a bad influence on actuation etc.

[0039] When putting in another way and a maker code is [ it is made to realize alphabetic transmit functions including a manufacturer code and ] in agreement with the sub-address information on an ISDN network, the DTMF signal at the time of a message, etc., the alphabetic information transmitted can be regarded as a maker's original information. By this, you may make it only regard as alphabetic information, and may recognize as a control code (control signal), and the data usually sent as alphabetic information is also making it recognize as a control code of a telephone set, and it becomes possible to operate the various (for it to be special) functions of a telephone set of it.

[0040] In addition, although the gestalt of operation of the telephone set by this invention was explained, especially this invention is not limited to the gestalt of these operations, and the deformation or the correction which can be easily hit by this contractor on an idea is included under the category of this invention. That is, although detection actuation of a control code is performed with the gestalt of this operation when a manufacturer code or a model code is in agreement, the code replaced with the maker code beforehand set up, for example among users may be made to perform detection actuation of a control code.

[0041] Moreover, although the gestalt of this operation explained the PHS telephone set to the example, there may be the necessity of being especially a PHS telephone set, and as long as no is the communication system which can realize control same not to mention other portable telephones and automobile telephone sets, it may be the usual wire telephone machine using combination, such as packet information using the code and ISDN circuit by the DTMF signal. Moreover, by connecting with

systems, such as video, and a personal computer or home security, in the end of a called party side edge, if this invention is used, it will also become possible to carry out remote control of these from the end of a calling party side edge.

[0042]

[Effect of the Invention] As mentioned above, if the control code which controls the telephone set concerned is contained in the additional information (alphabetic character message information) which was received according to the telephone set of this invention as explained to details, since control applicable to this control code can be performed, it becomes possible from the end of a calling party side edge to perform control in the end of a called party side edge if needed. Therefore, the correspondence of the service function of the end of a calling party side edge and the end of a called party side edge also for breadth and a user's various uses is attained.

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## PRIOR ART

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[Description of the Prior Art] In an ISDN network, in case the call connection demand whose end of a calling party side edge sends out the selection signal which shows the telephone number in the end of a called party side edge to a switched network is performed, sub-address information can be transmitted after the telephone number in the end of a called party side edge the end of a calling party side edge. With the ISDN network, by transmitting such sub-address information, even when bus wiring connection of two or more telephone sets is made at the telephone number for example, in the end of a called party side edge, it makes it possible to call a specific telephone set.

[0003] The use use of such sub-address information does not call breadth and a specific telephone set, but research and development of the telephone set system equipped with the alphabetic transmit function to send alphabetic information etc. in the end of a called party side edge using sub-address information are done on the other hand in recent years. If the call-in information from ISDN is received, the sub-address information included in this call-in information is detected and analyzed, and, specifically, the conventional technology which displays the alphabetic character corresponding to this sub-address information on displays, such as LCD, is indicated by JP,6-334776,A or JP,3-38946,A.

[0004] Moreover, in the Personal Handyphone System (PHS is called henceforth) which used the ISDN network, for example, transmission and a display of alphabetic information are enabled by the alphabetic transmit function using such sub-address information, without the end of a called party side edge answering. It enables it to correspond to a user's various needs by corresponding also to such "non-voice communication link" service by enabling it to use a PHS telephone set as a pocket bell in which transmission of an alphabetic character message, management, and a display are possible, in addition transmitting the alphabetic character message using a DTMF signal.

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**DESCRIPTION OF DRAWINGS**

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[Brief Description of the Drawings]

[Drawing 1] The operation flow chart which shows arrival-of-the-mail actuation of the gestalt of operation of the telephone set by this invention.

[Drawing 2] The operation flow chart which shows dispatch actuation of the gestalt of operation of the telephone set by this invention.

[Drawing 3] The functional block diagram showing the gestalt of operation of the telephone set of this invention.

[Drawing 4] Explanatory drawing (a) having shown an example of the display and actuation in the gestalt of this operation, and explanatory drawing having shown an example of sound recording management data (b).

[Drawing 5] The sequence diagram showing the processing sequence of an origination side and a destination side in the gestalt of this operation.

[Drawing 6] Drawing in the gestalt of this operation in which wearing and showing the data format of a sub-address.

[Drawing 7] The operation flow chart which shows the gestalt of other operations of the telephone set of this invention.

[Drawing 8] The operation flow chart which shows the gestalt of other operations of the telephone set of this invention.

[Description of Notations]

12 Key Input Section

14 Display

17 Antenna

18 RF Circuit Section

19 Protocol Control Section

30 CPU

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[Translation done.]

**\* NOTICES \***

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**TECHNICAL FIELD**

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[The technical field to which invention belongs] This invention uses a telephone set, sub-address information [ in / more specifically / an ISDN network ], and the additional information by the DTMF (Dual-Tone-Multi-Frequency) signal at the time of a message, and relates to the telephone set system which has an alphabetic transmit function and a sound recording function. In addition, the term "a telephone set" used on these specifications is used in semantics also including the information terminal equipped with the telephone set function with these specifications.

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[Translation done.]

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**EFFECT OF THE INVENTION**

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[Effect of the Invention] As mentioned above, if the control code which controls the telephone set concerned is contained in the additional information (alphabetic character message information) which was received according to the telephone set of this invention as explained to details, since control applicable to this control code can be performed, it becomes possible from the end of a calling party side edge to perform control in the end of a called party side edge if needed. Therefore, the correspondence of the service function of the end of a calling party side edge and the end of a called party side edge also for breadth and a user's various uses is attained.

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[Translation done.]

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**TECHNICAL PROBLEM**


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[Problem(s) to be Solved by the Invention] However, in such an alphabetic transmit function, it was what transmits, manages and displays only the message in an alphabetic character. For this reason, there was a problem that he had to telephone, again to tell the voice-told message relevant to transmission of an alphabetic character, for example. Moreover, when a called party was not able to answer according to a certain situation, the called party needed to set up the sound recording function (answering machine function) interlocked with automatic answering and it each time, and a calling party side was not able to control the end of a called party side edge to arbitration. Thus, although it was possible to have performed an alphabetic character transport service with the conventional technology, it was not only able to remain in transmission of an alphabetic character, management, and a display, and service realized by controlling the end of a called party side edge was not able to be offered.

[0006] Moreover, the conventional technology of memorizing the message which would perform automatic incoming connection processing and will have been sent by the calling party if it judges whether it being the telephone number into which the telephone number in the end of a calling party side edge is registered and is registered when JP,6-14651,B has arrival of the mail, for example is indicated. However, with this conventional technology, the telephone number in the end of a calling party side edge must be registered into the telephone set of a destination side to the last, and a calling party side was not able to control the end of a called party side edge to arbitration like the conventional technology mentioned above. Moreover, a DTMF signal and the control signal in an ISDN network are incompatible, and control command differed by each method.

[0007] This invention solves the technical problem of such conventional technology, and the alphabetic transmit function by additional information other than the speech information using sub-address information, the packet information using an ISDN circuit, or a DTMF signal is developed further. While using the alphabetic information in additional information and sending alphabetic information to the end of a called party side edge from the end of a calling party side edge It aims at offering the high telephone set of functionality which enables control control by alphabetic transmit also in the terminal on the system by which the communication modes of alphabetic transmit differ by making it possible to control the end of a called party side edge by alphabetic transmit (communication link).

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[Translation done.]



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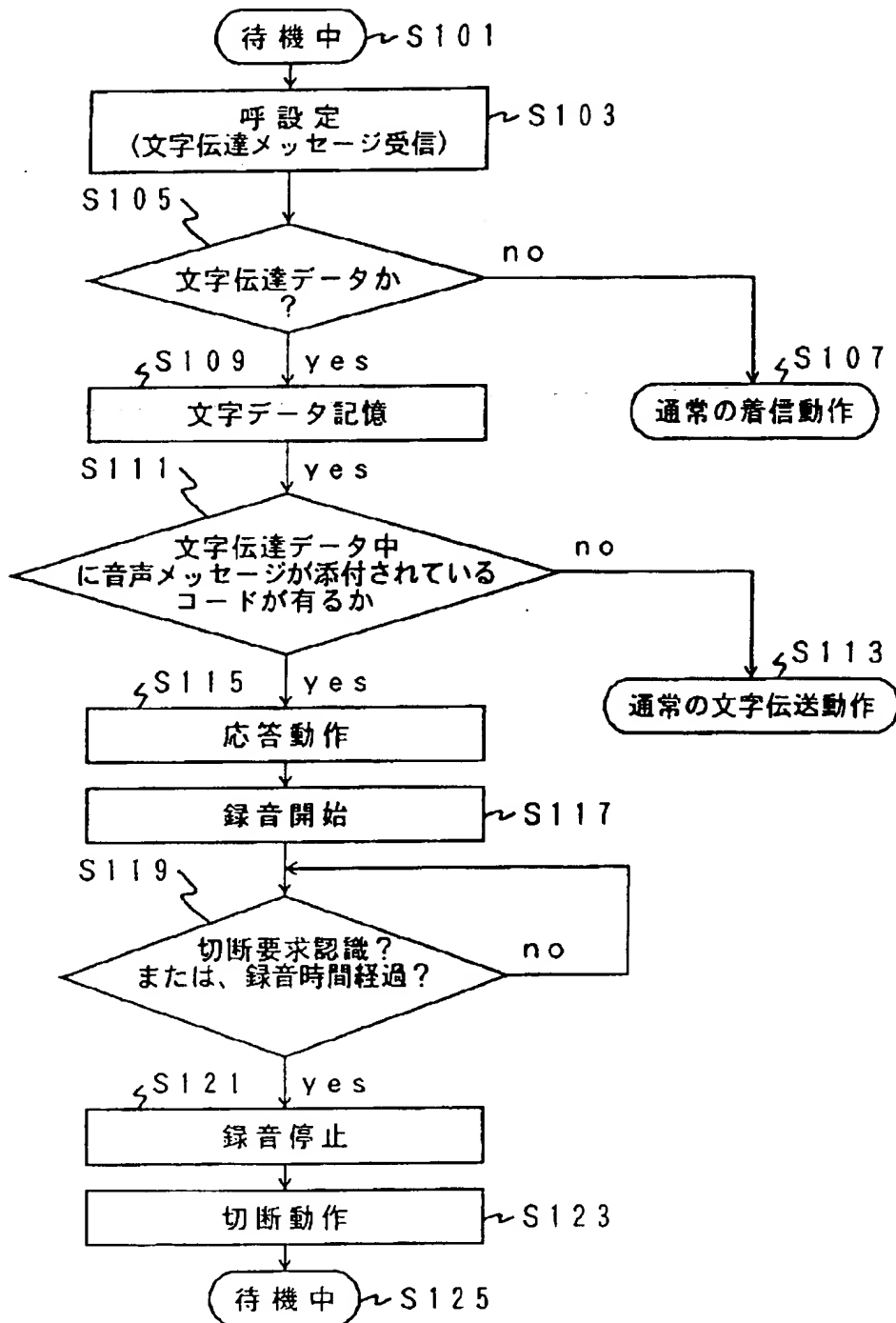
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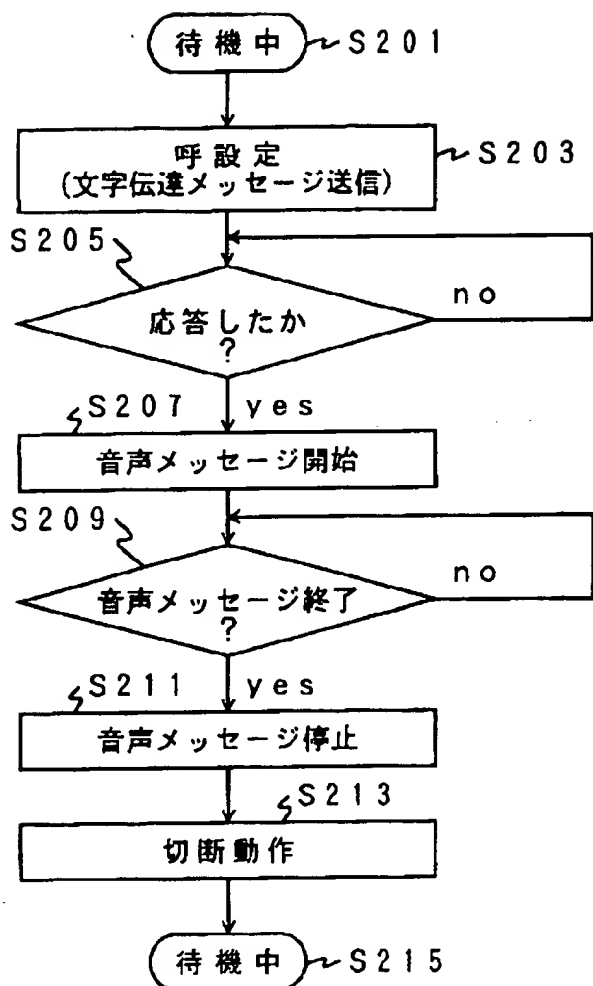
**DRAWINGS**

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[Drawing 1]

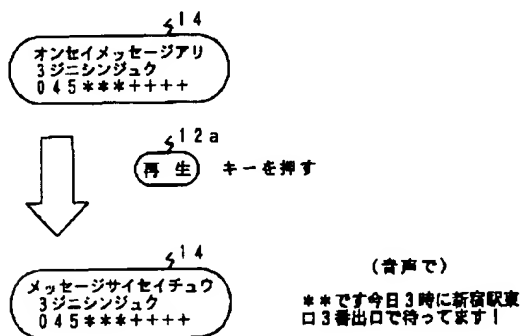


[Drawing 2]



[Drawing 4]

(a)



(b)

発ID	伝送された文字情報	音声メッセージ
045*****	3ジニシンジユク	**です今日3時に新宿駅東 口3番出口で待っています!

[Drawing 6]

Drawing 6

ビット

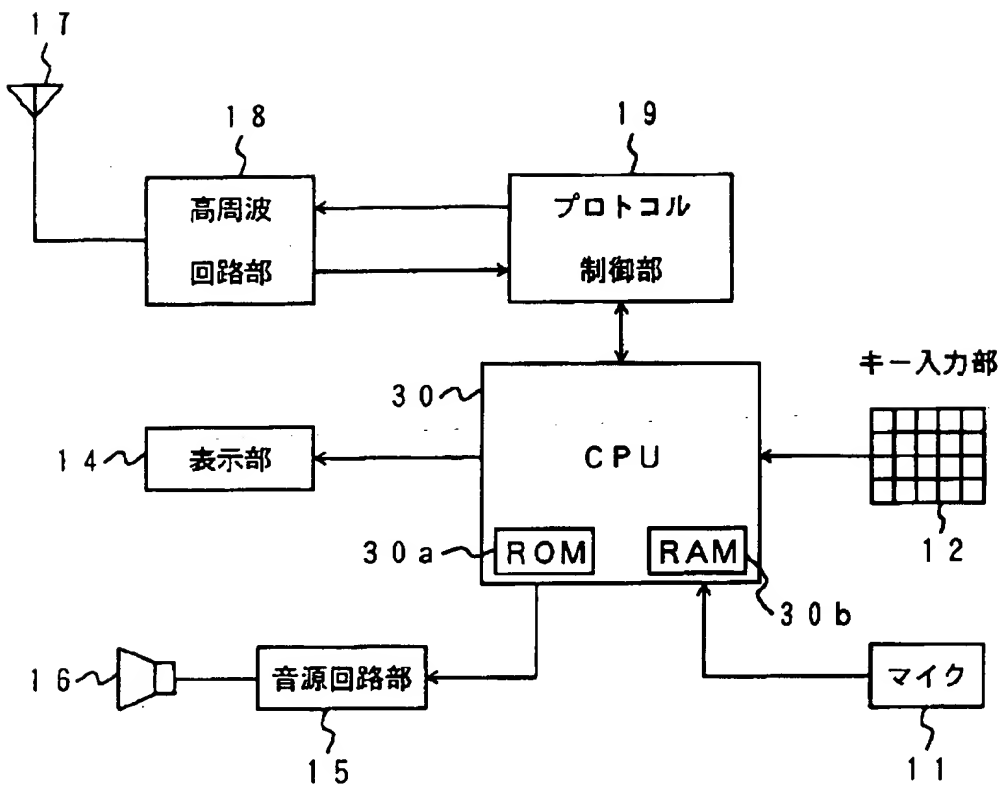
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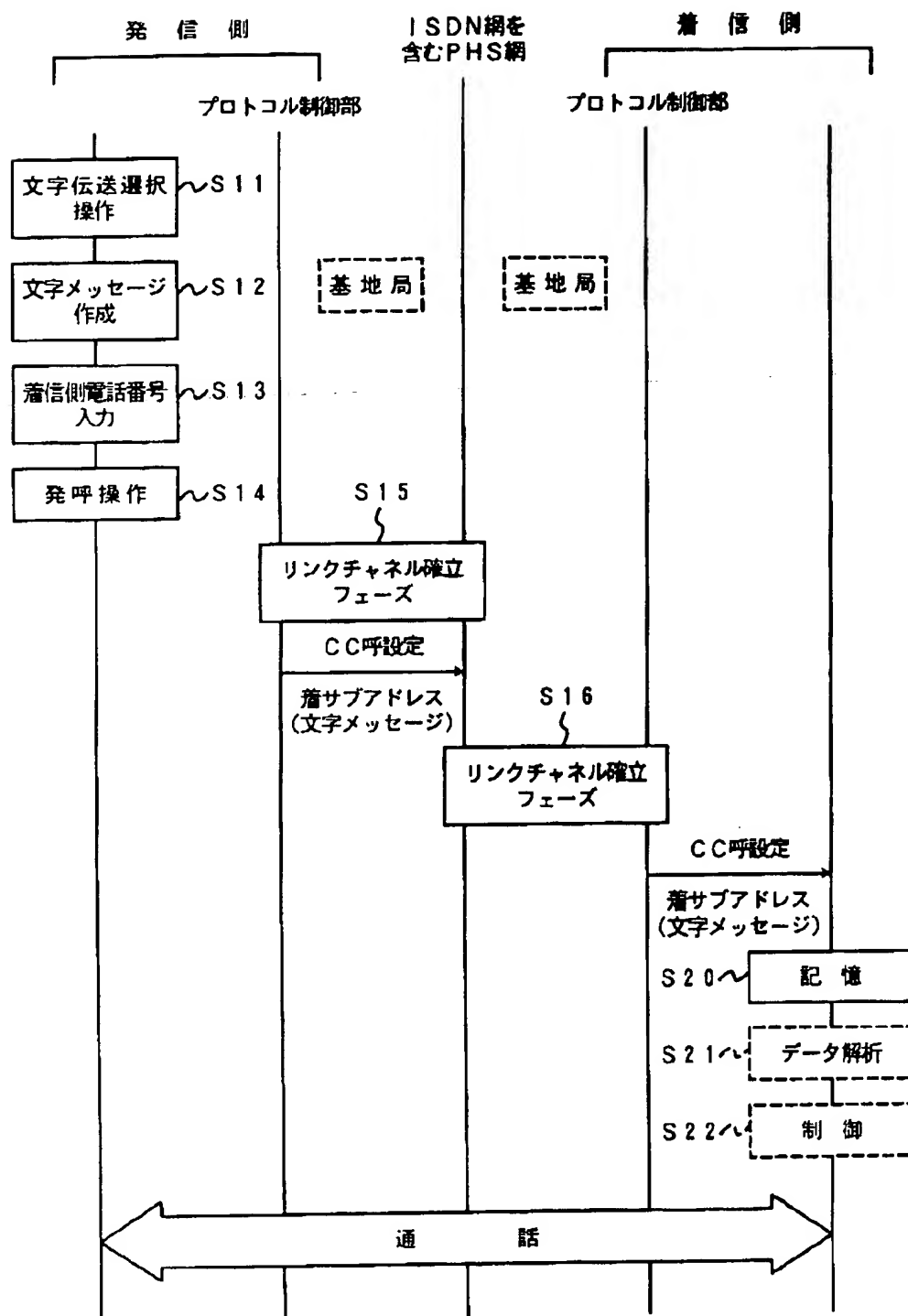
着サブアドレス内容長

拡張	サブアドレス種別	E/O	予約

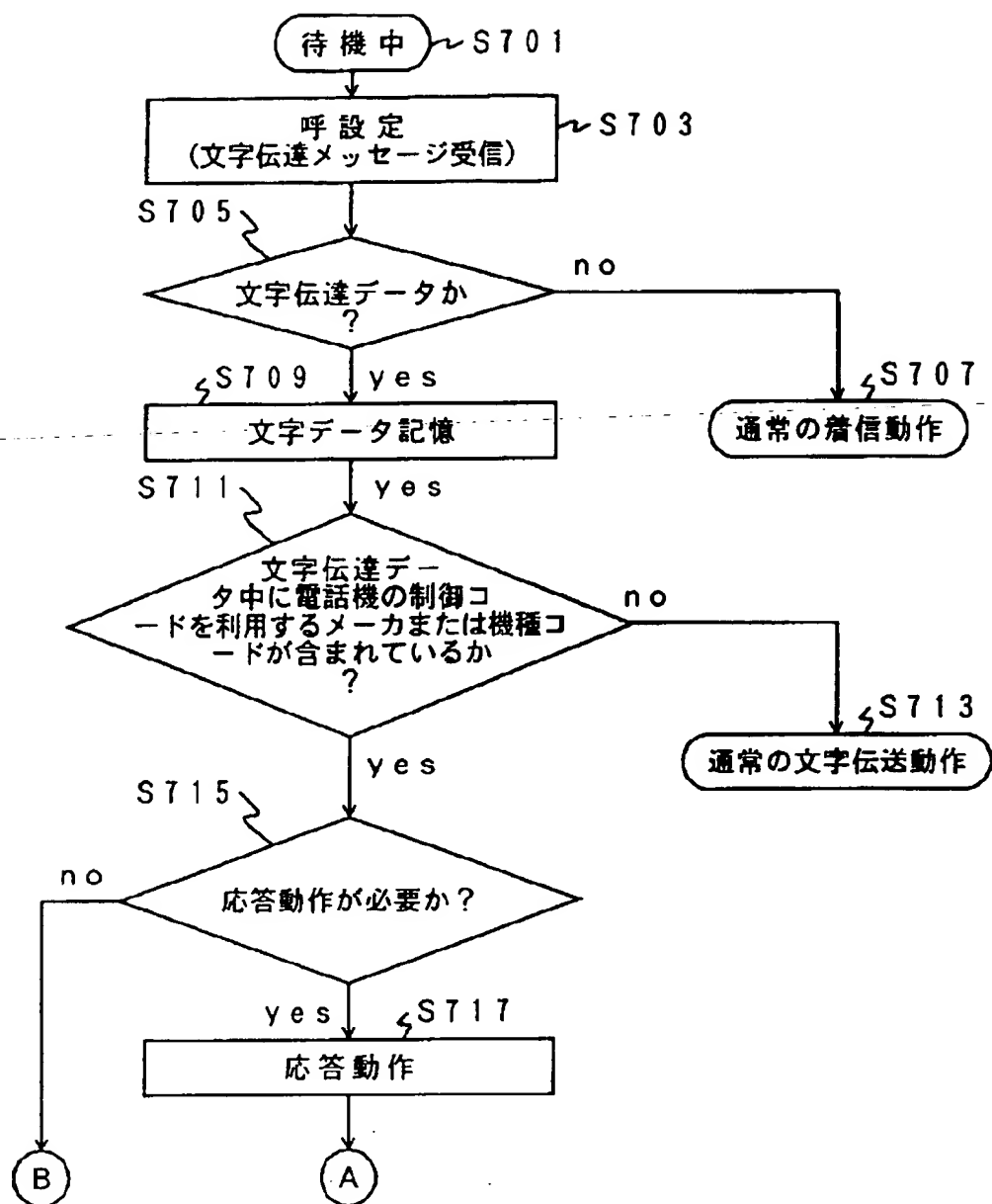
[Drawing 3]



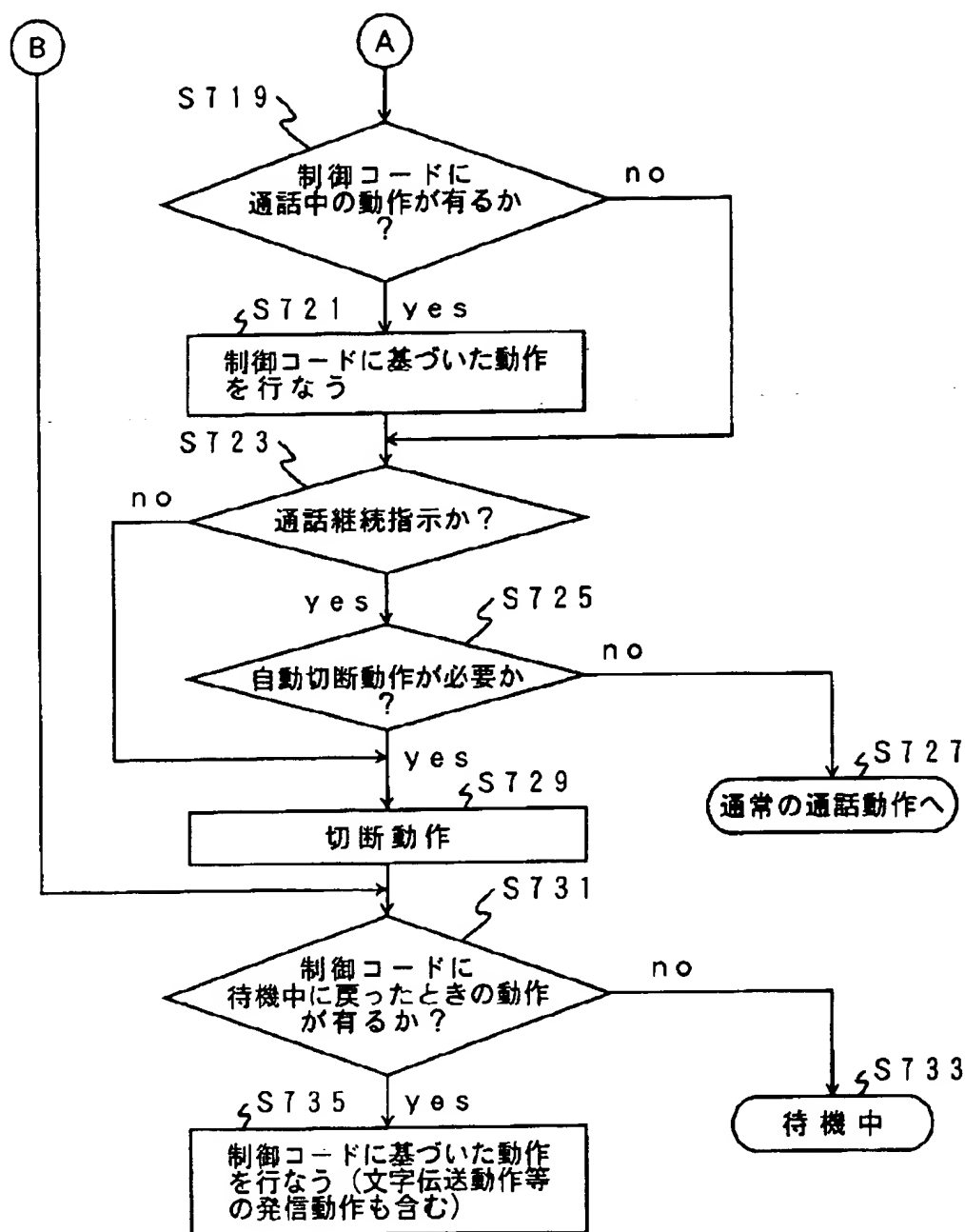
[Drawing 5]



[Drawing 7]



[Drawing 8]



[Translation done.]